Army and Navy Chronicle,

AND SCIENTIFIC REPOSITORY.

Wm. Q. Force, Editor and Proprietor.—$5 per annum.—Office corner of 10th & D streets.

VOL. I.] WASHINGTON, THURSDAY, MARCH 23, 1843. [No. 11.

Congressional Documents.

HUNTER'S SUBMERGED PROPELLER.

WASHINGTON CITY, *Feb.* 26, 1843.

GENTLEMEN: Upon witnessing to-day a full and fair trial of the submerged horizontal propeller, as exhibited in the United States steamer Union, you were pleased to direct that I should accompany the model boat, shown you to-day, with a statement to your honorable committees descriptive of the many advantages, for naval purposes, possessed by this boat over all others hitherto known. In obedience to these instructions, I have the honor to submit herewith the accompanying report, as well as a copy of a letter addressed to the honorable the Secretary of the Navy, under date of November 18, 1842, "exhibiting, in detail, a plain practical way to economize vastly in the expenditure of money and time in the discharge of several duties indispensable to the naval service," by means of this same submerged propeller.

Very respectfully, &c., I have the honor to be your very obedient servant,

WM. W. HUNTER,
Commanding U. S. steamer Union.

To the NAVAL COMMITTEES
of the Senate and House of Reps. U. S.

To the Naval Committees of the Senate and House of Representatives of the United States:

In presenting the accompanying model of a steamer for harbor defence, as well as for service at sea, to the consideration of your honorable committees, I beg leave to submit with it the following remarks:

It is manifest, and universally acknowledged, that the heavy armed national *steam*-vessels of Europe may be placed in every navigable water that is not adequately defended against this new power. By reason of their *celerity and certainty of movement*, the shot which shall announce their assault will be the first intimation had of their approach: and their attack thus becomes the more formidable, because accompanied by the panic of surprise. It is also known, that the extent of our inland navigable waters is more than twice the extent of our seacoast, and, forming the great highways for transportation, they bear on their surfaces and in the commercial depots established on their shores, the contributions of the two greatest sources of national wealth, the produce of the soil, and the productions of the art and industry of the country. It is further known that the naval powers of Europe have already applied to their fleets this powerful auxiliary of steam. In view of these facts, the following self-evident truths are therefore presented: first, that our vulnerable extent of territory is trebled; and, second, that protection is now required against a new form of naval power, possessing, as before stated, *celerity and certainty of movement.*

This controlling change in the mode of naval warfare, has placed our country on a vantage ground eminently beyond all others, and it behooves us to improve it. On the banks of the great outlets of our vast interior to the ocean, and far removed from the seaboard, the earth teems with the iron and the coal, the main essentials to our defence, while the operatives, skilled by long habit in working them, abound in every section of our country. Nature has thus furnished in chief the elements of protection required against this new power, at points so advantageously placed, that the means of protection we shall propose will be stripped of much of the enormous cost which has ever heretofore attended our systems of defence. With the materials at hand, and removed from the danger of assault by reason of their being so far inland, defences will no longer be required to protect our docks and arsenals of construction; nor will we find annually encumbering our naval estimates, the huge amount for repairs, upon the *iron steamers* which we here propose to build, and upon which we purpose to rely as our means of defence, which now form one of the largest items of naval expenditure.

Having reached this point, let us examine into the comparative merits of this system of defence and its economy. We claim for it—

1st. That the original cost of these vessels shall be one-third less than that of the ships heretofore depended upon to perform the service for which this controlling change in naval warfare has entirely unfitted them; and that these vessels shall secure to us the control of the sea.

In demonstration of this, a galvanized iron steamer of this description, of 3,133 and forty-five ninety-fifths tons, mounting on one deck a battery more formidable than that of a first class ship-of-the-line, viz: 22 10-inch double fortified shell guns can be built for $350,000, a sum nearly one-third less than the average cost to the Government for the construction and equipment of the North Carolina or Delaware, exclusive of their armament and stores, which amounted, in the aggregate, to $975,220, or to $487,610 for each.*

A reference to the annexed paper, marked A, being "an enumeration of the many advantages of Hunter's steamer," will exhibit clearly the superiority of this mode of construction over all others. Being impervious to shot, ever under entire control, whether by steam or sail, with speed equal to any emergency; and throwing a greater concentrated weight of metal superior in range to any thing known, our position will be conceded to us, that a fleet of these vessels will secure to us the control of the sea.

2d. We claim for these vessels an entire exemption from cost for repairs, because the iron of which it is proposed to construct and equip them, having undergone the process of galvanism, is freed from corrosion by rust, and therefore becomes indestructible; and, as a corollary from this, it follows:

3d. That, from the character of their construction and equipment, they will be ever ready for sea.

4th. The expense of maintaining them will be one-third less than that of the ships now afloat, and the means of manning them ever at hand, because the number of *seamen* required for them is *nine-tenths* less than the complement for the ships now in use, while able-bodied landsmen will make up the rest of the

* Cost of the Delaware, - - - - - - - $543,368
Cost of the North Carolina, - - - - - - 431,852
Aggregate, - - - - - 975,220
The North Carolina cost less than any other 74 in the service.

crew, which shall number but two-thirds that of a ship-of-the-line. The use of steam being designed as an auxiliary power solely, wholly independent of the canvass, and efficient in itself, it will be resorted to only on emergencies; its cost will, therefore, be comparatively light, whilst the wear and tear of the canvass, gearing, &c., it being so simple, will be insignificant when contrasted with that of the ships, and will, in reality, save a difference equal to the cost of their fuel.

5th. Their capacity for carrying fuel is so great, that without the aid of canvass they will be enabled to keep the sea as regular cruisers for two months; and with sails alone they will be as efficient as any other class of vessels. This position will be made manifest, as well as the following, by an inspection of the annexed paper A, and the accompanying model.

6th. They cannot be sunk by shot from cannon afloat, nor can they be destroyed by fire.

7th. By reason of their light draught of water, it never exceeding sixteen feet in the largest class vessel, all of our southern harbors, to none of which our larger ships can now have access, will be rendered available, and open for protection and defence.

8th. This floating force, possessed of *celerity and certainty of movement*, can, with the rapidity of an express, be concentrated at any given point of attack; and the expenditure necessary to its entire creation will cost the country absolutely less than the fixed defences for Hampton Roads and the depot at Norfolk alone.*

These positions conclusively established, as we regard them to be, illustrate the incalculable advantages in point of usefulness, efficiency, and economy which this system presents over our present means of defence, whether employed in protecting our commerce in the remotest quarters of the earth, or used as a defence for our firesides and homes from foreign invasion.

All of which is respectfully submitted.

WM. W. HUNTER,
Lieut. U. S. Navy.

February 26, 1843.

Washington City, *Nov.* 18, 1842.

Sir: By your direction I have the honor to submit the following statement, exhibiting in detail a plain practical way to economise vastly in the expenditure of money and time, in the discharge of several duties indispensable to the naval service.

A small iron steamer, of light draught of water, with submerged horizontal metal propellers, should be appended to each depot; her dimensions adapted to the ready passage of locks in canals, with power for towing, and capacity to carry at least one hundred tons. This manner of propulsion is ascertained, beyond all question, to be perfectly adapted to the navigation of canals as well as the sea, and for the service of towing and despatch, as well as for the uses of an ice-breaker. Such a vessel can be built entirely of iron, complete for operation, for $35,000. And when it shall be desirable to use her for purposes of *assault, lookout, surprise, or signal*, a heavy pivot-gun will be mounted on her, which shall at all times be kept in readiness for this service, at the depot to which she is assigned.

In the event of hostile fleets in superior force occupying parts of our bays and sounds, forming the common navigable highway between distant points of our country, this small steamer may with safety pass beyond the range of their guns, because the extensive flats in our bays and sounds admit of the passage of vessels of light draught of water, for most part beyond gun-shot range of the channel; and thus may be effected the important service of a rapid, economical, and safe transportation through canals, shoal water, and over flats from the lakes to the sea-coast, from depot to depot, and along the entire line of our Atlantic seaboard, heavy ordnance and ordnance stores, troops, seamen, anchors, chain cables, ships' tanks, provisions, and all the munitions of war that it may be necessary to assemble with despatch at a given point, as well as coal for the use of the steamers, &c.

The present available usefulness of these little vessels, will be found in the facility and despatch they will afford in the transportation of seamen, provisions, ordnance, and other weighty stores, such as anchors, chain cables, iron tanks, blocks, rigging, &c., the freight money on which, paid yearly by the Government, will more than build, equip, and defray all the expenses of said steamers. Besides this, their saving to the Government in towing national vessels to and from the sea against adverse winds and currents, and the facility and economy with which they can supply vessels with water and provisions, will save yearly a large amount of money.

The material of which they are constructed, being imperishable and incombustible, will render repairs for many years unnecessary. The water-tight iron bulk-heads of the vessels, dividing her into distinct sections, render her a life-boat, for although shot or other injuries may cause one section to fill with water, yet the buoyancy obtained from the others will still keep her afloat. Thus is obtained these three important ends: 1st, An insignificant cost (if any) for repairs; 2d, A guarantee against destruction by fire; and 3d, An almost entire security from the risk of sinking.

The cost of maintaining and paying her crew will be almost nothing, because it should not consist of more than four persons. When it is desired to use the vessel, an assistant engineer and three men should be detailed from the depot for her crew. When her service shall have been performed, this crew will resume their regular duties at the depot, and the vessel may be secured to the wharf, where she may remain without the cost of attendance, because, as before stated, the material of which she is constructed is not perishable.

If it is desired to supply speedily a ship-of-the-line, in Hampton Roads for instance, with 100,000 gallons of water, the manner in which it will be done by this vessel is this, which will at once exhibit the great economy of time and money consequent upon its use. Her crew, viz., the assistant engineer and three men from the depot, will be directed to proceed to the Dismal Swamp canal with the steamer. Her fuel will cost nothing, because it is abundantly supplied by the cuttings and the chips of the navy yard, which, for other purposes, would be of no value. When in the canal, a cock in the side of the vessel is turned, and she will soon take in 25,000 gallons of fresh water; the cock is then shut, and the little steamer proceeds to the ship. When alongside, instead of requiring the labor of the whole crew of the ship for a day, with the wear and tear of cordage and water casks to hoist in these 25,000 gallons of water, as well as the wear and tear of boats, oars, sails, rigging, &c., the engine of the steamer works a force pump, to which is attached a hose leading to the ship's water casks or tanks, and with the expenditure of a few chips, the 25,000 gallons of water are placed in the ship's water tanks, and the steamer, in all weather and against any tide, when boats could not perform the service, will repeat, *with certainty*, the operation until the vessel is watered, while the crew of the ship may be otherwise employed in preparing for sea.

It is a truth, that the cost of wear in rigging and water casks in the operation of hoisting in the tenth

* Cost of Fortress Monroe, at Old Point Comfort, - $2,030,284
Cost of Fort Calhoun, at the Rip Raps, - - - 1,983,726
Total, - - - - - - - 4,014,010

part of her water, together with the wear and tear of the ship's boats, oars, sails, &c., used for the conveyance of the same, would more than defray the whole expense of watering the vessel by the plan proposed, to say nothing of the loss of time, labor, exposure of the crew, and detention of the vessel. By the same means, the vessel which might be otherwise kept from her cruising ground by adverse winds and tides, may be towed to sea at comparatively no expense. This same service, as it is now performed by private steamers, costs twenty times as much, and is attended with risk of injury to the vessel being towed, because these steamers are not suitably constructed for such service, and their commanders, not being amenable to naval law, they, in fact and in practice, command the time and manner of executing this service.

The foregoing statements are the more confidently submitted for your consideration, from the fact that I have already performed a part of the services herein related, with my little experimental steamer, the "Germ," propelled on the plan described; and I take this occasion to state, that, in the course of my experiments with her, she has run through ocean, lakes, rivers, and canals over 10,000 miles, with a crew of *three* persons, and at a cost of *five* dollars per day, including fuel. I have the satisfaction further to acquaint you, that I have taken the first vessel, viz: the "Germ," by steam-power, from the Atlantic sea-board to Lake Erie, and thence back to her starting point in North Carolina, and, in so doing, have practically shown that, so soon as the work of enlarging the Erie canal through the State of New York, now in progress, shall be completed, armed steamers of 200 tons of this construction, by reason of their peculiar adaptation to canal navigation, they causing no injury to the banks, may, at the pleasure of the Department, be despatched from the Atlantic to Lake Erie.

In developing these facts, which appear to me, in a military and other points of view, valuable to our country, I have cheerfully incurred much expense, which has brought me no return beyond the attainment of these ends.

Should you concur with me in the belief that this experimental boat, the "Germ," may be in many ways usefully employed in the service, I respectfully propose that she shall become the property of the Government at her actual cost to me, viz: $5,000.

Respectfully, your obedient servant,

WM. W. HUNTER, *U. S. N.*

Hon. A. P. Upshur.

AN ENUMERATION OF MANY OF THE ADVANTAGES OF HUNTER'S STEAMER OVER ALL OTHERS.

1st. The machinery and paddle-wheels are entirely protected from shot and the irregular action of the sea.

2d. The entire length of the deck is available for a battery.

3d. By means of the shield-deck the vessel is rendered a life-boat, and cannot be sunk by shot.

4th. This vessel can out-manœuvre all others, by reason of the lateral or horizontal action of her paddle-wheels, which enable her to turn on the centre of a circle, while all other vessels must turn on the arch of a circle; she can, therefore, at any time readily give or avoid a raking fire, and, for the same reasons, can in a narrow channel-way keep under way with her broadside against or across the tide, and thus, by a vibratory movement, without advancing or receding, can, in a channel-way only her length in breadth, command her position, modifying it as may be necessary, and prolong her fire at pleasure; she thus is equal to a line of batteries of the same weight of metal, as great in extent as the navigable length of the channel.

5th. This vessel requires no rudder to direct her course, being steered by the throttle valves, and starting bars of the engine.

6th. The action of her paddle-wheels and machinery being noiseless, she is fitted for surprise.

7th. Having neither wheel-houses, guards, nor cross-shafts, in point of tonnage, she saves their weight, and that of the paddle-wheels, which float.

8th. The simplicity of her machinery, the consequence of her paddle-wheels, and their cases being made to serve as air-pumps and condensers, and thus combining the atmospheric auxiliary power and all the advantages of the low pressure engines with the simplicity and lightness of the high, gives a vast available amount of tonnage for the transportation of fuel, and reduces the actual weight of the engines full three-fourths below that of those at present in use.

9th. The power of the engine being imparted in a line with the keel, and not at right angles to it, as is the case with the ordinary paddle-wheel, the advantage is gained of applying the motive power at the junction of the centres of gravity and motion, and consequently at the point where it is most available to propel; and the propellers, acting on a continuous resistance, being always submerged, the vessel and machinery are subjected to less wear and tear than that consequent upon the action of the ordinary paddle-wheel, which is applied to the surface of the water with the mechanical power of the hammer, and is subject to the gravitating influence of the water in emerging from it.

10th. As a cruising steamer, using her sails to prolong her supply of fuel, her wheels subject her to scarcely any perceptible diminution of speed, because they are mainly within the body of the vessel, and, when disconnected from the engine, float, and consequently revolve readily of themselves.

11th. The propeller becoming more effective by the denser resistance of its increased submersion, the vessel may be laden to the extent of her greatest capacity of displacement, while other steamers cannot be laden beyond the dip of their paddle-wheels. This advantage, in fact, doubles the relative available tonnage of the vessel.

12th. When built of iron, her propellers acting below the floating ice, she is perfectly adapted to the uses of an ice-breaker.

13th. A vessel thus propelled cannot in a heavy sea broach to, or bring by the lee, unless through the grossest negligence, because, the propellers being in the centre of the vessel, disconnected and lateral in their action, the vessel can readily be brought out of the trough to head the sea. The ordinary steamer is ever liable at such a time to these dangers, because then her paddle-wheels cannot be disconnected.

14th. This vessel may run alongside a wharf, board, or tow, in a seaway, with entire protection to the propellers, inasmuch as they are under shelter from the projection of the vessel's wales. The ordinary steamer cannot do these, because her paddle-wheel shaft would interfere to unship the wheels, and the wheel-houses of themselves would unfit her for the service.

15th. In a gale of wind it would never be attempted to heave to an ordinary steamer, unless she could display in proper position more canvass than the surface of her wheel-houses, which is always impossible; while this vessel can be hove to with perfect safety either under canvass or under her lee wheel. Through a head sea she may be driven with nearly the same velocity as through smooth water, because the propellers are, in either case, equally efficient, being always submerged. Not so with the ordinary steamer. At such time she has always one wheel too deeply immersed, while the other is revolving almost entirely in the air, and the impossibility of disconnecting them in consequence of the

irregular action imparted to the machine, renders them both, at such a time, not only useless, but extremely dangerous.

WM. W. HUNTER,
Lieut. U. S. Navy.

February 26, 1843.

COPY OF THE OFFICIAL REPORT OF THE COST OF THE U. S. STEAMER UNION, 1,040 TONS.

	Days' work.	Cost of labor.	Total cost.
Hull, - -	18,644¾	$32,265 05	$58,374 90
Mast and spars,	143¼	264 00	423 48
Boats, - -	425¾	803 27	1,218 29
Sails, - -	225¼	413 56	2 221 95
Water casks, -	–	–	1,421 34
Rigging, - -	290¼	476 50	1,046 11
	19,729¼	34,222 38	64,706 07

Approved:
W. BRANFORD SHUBRICK.

Patterns and drawings, - - -	$1,156 88
Materials for patterns, - - -	263 87
Labor on engines; four engines, two large and two small, - - -	19,754 68
Materials, ditto, - - - - -	9,682 44
Labor on boilers; four boilers, - -	8,094 61
Materials, ditto, - - - - -	5,659 05
Labor on paddle-wheels, - - -	2,368 34
Materials, ditto, - - - - -	1,763 90
Labor and materials from joiner's department, - - - - -	745 25
Condensers of engines, -	125 25
	49,614 27
Deduct 3,291 pounds of brass and composition borings, turning, and condemned castings, at 12½ cents per lb.,	410 37½
Total cost of machinery, -	49,203 87½

Very respectfully, your obedient servant,
WM. M. ELLIS,
Engineer, U. S. N.

G. J. PENDERGRAST, Esq.,
Commander, U. S. N.

Entire cost of the U. S. steamer Union in operation, $113,909 94¼.

BREVET PAY OF GENERAL GAINES.

LETTER FROM THE SECRETARY OF WAR.

WAR DEPARTMENT, *February* 24, 1843.

SIR: I have this day received the resolution of the House of Representatives, directing me "to inform the House whether the pay of Brevet Major General Gaines has been reduced to that of a brigadier general, and, if so, at what period such reduction commenced, by whose order, and the reasons therefor."

No order for the reduction of the pay of General Gaines has been made, to my knowledge or belief; and, of course, there are no reasons to be assigned therefor.

The act of Congress of March 2, 1821, provides that there shall be one major general and two brigadier generals in the army of the United States. Edmund P. Gaines is one of those brigadier generals, and is by law entitled only to the pay and emoluments of that office. He is also a major general by brevet, having received that appointment as some reward for his distinguished military services, and particularly for his gallantry on the 15th of August, 1814. By the act of August 16, 1818, it is provided "that officers of the army who have brevet commissions shall be entitled to, and receive, the pay and emoluments of their brevet rank when on duty, and having a command according to their brevet rank, and at no other time." A brevet major general, when commanding a division of four regiments, or at least forty companies, is, by the standing regulations of the army, entitled to his brevet pay and emoluments. While, therefore, the regular pay of General Gaines as a brigadier cannot be reduced by any order of this Department, he may receive the pay of a major general when in command, according to the regulations; and when he ceases to have such command, the brevet pay ceases also. Any reduction that has taken place in the amount of his pay has, therefore, been in consequence of the provisions of the law above quoted.

I have the honor to be, sir, very respectfully, your obedient servant,
J. C. SPENCER.

Hon. JOHN WHITE, *Speaker House of Reps.*

RUSSIAN HEMP.

LETTER FROM THE CONSUL AT RIGA.

RIGA, *June* 23, 1842.

SIR: I should certainly have given an earlier answer to your estimable favor of the 26th instant, if I had not been hindered from so doing by an absence hence for several days. I now, therefore, hasten to give the solution of the several points in question according to the explanations received from our principal hemp-dealers and land-owners who cultivate this article.

In answer to the first question, If people pull or cut the hemp, and if they separate the male from the female stalks in Russia? I beg to say that the hemp is pulled and not cut, and only the female stalks; while the male is totally unfit, and for the greater part thrown away without further notice. Respecting your second inquiry. How long the hemp is allowed to remain in the fields before putting it in water? and if it is put into the same green, wilted, or dried? I take the liberty of replying that the hemp, after being pulled, generally remains a fortnight to three weeks in the fields, such as the more or less moist weather renders it suitable; this time having elapsed, it is even still green put into water.

As regards your demand whether they use brooks, ponds, or vats, in water-rotting, I beg to say that ponds are preferably used which are in the neighborhood of brooks, and provided with fresh water by the latter. It is, however, requisite not to give them too much fall in order to avoid a current or flood. Vats are never employed. As to your question, if they allow the hemp in taking it from the water, to take dew, frost, or rain, and if so, how long, I have learned that our country people after having put the hemp out of the water, house it, in order to be sheltered from rain, dew, and that slight frosts do not materially injure the growth; still it is far better to avoid the latter.

With respect to the process of breaking and cleaning, I dare say that it is done in our country in a very simple way. At first, the hemp is put upon a bench hollowed in the shape of a rifled channel, and broken by a piece of wood or plank which fits exactly into these rifles. The cleaning of the hemp is effected immediately after its having been brokon in the same manner; in the first place by being beaten with a thin beater of six to eight inches, which cleans it from the coarse woody parts, the further offal is loosened and separated by way of hackling.

ALEXANDER SCHWARTZ.

Foreign Selections.

From the United Service Magazine.

THE BALANCE OF MILITARY POWER IN EUROPE.

Few of the many who speculate on the chances of a European war, ever take the trouble to inquire, what elements such an occurrence would bring into action, or what the present state may be of the military establishments of the four great continental powers.

In looking to the present state of continental politics, it will strike even the most superficial observer, that the *status quo* cannot long continue to exist, and that this moment more than one *casus belli* exists in embryo.

Under this impression we are led to believe, that a comparative view of the military systems of Russia, Prussia, Austria, and France, may not be altogether devoid of interest; and we propose, as briefly as possible, to sketch the peculiarities of each of their armies, dwelling more especially on such points as afford data to form a comparative estimate of their respective fitness for immediate service in the field.

There exists in every army four grand elements which constitute its strength and secure its efficiency; and we shall have occasion to remark, that the armies of the above-named powers contain these elements in very different proportions. The conflicting opinions and estimates which are every day formed by apparently competent judges, as to the relative efficiency of the continental armies, serve to show that it is by no means an easy task to form a correct estimate on this subject; but we apprehend that much of this difficulty arises from our neglecting to consider separately the infantry, cavalry, artillery, and etât major, or general staff, of the army which we select for the subject of our criticism.

It is almost superfluous to remark, that the four great powers are very differently circumstanced as regards the elements of their infantry, cavalry, artillery, and etât major. There is another matter deserving our attention, no less than this, namely, the influence which the duration of service of the private soldier has on the efficiency of the whole army. A third point is the mode of recruiting; but to this we shall not have occasion to do more than allude, as it is pretty nearly alike for all four countries, namely, by the much abused and little understood system of conscription. We shall endeavor to point out how far these circumstances influence individually each of the four armies in question; and as they are nearest to us, let us commence with the French.

FRANCE.

There can be no hesitation in granting to the French soldier the good qualities of bravery, frugality, and intelligence. If he does not possess the physical powers of the German or Briton, he is, nevertheless, able to march as well, or perhaps better, than either, especially when rations are short; but certainly he possesses no other superiority.

When Napoleon said that the fate of battles depends on the feet of the infantry soldier, he only gave a different form to another of his maxims, "Le secret le plus important de la guerre consiste a se rendre maître des communications;" and this secret depends further on the accuracy of the information obtained by the etât major as to the physical conformation of the country which is the seat of war, a perfect acquaintance with which is indispensably necessary to the success of every strategical combination. It is in this branch of military science that the French army is, and always has been, pre-eminent; it is their superb etât major to which most of their successes have been owing.

The campaigns of Napoleon exhibit, even more strikingly, a great superiority in strategical disposition, than in the subsequent tactical handling of troops in the field, however admirable this point of his generalship usually was. Hence we see the fate of a campaign often decided by a single battle, in which the French army often suffered more severely than their beaten adversary. This was mainly to be attributed to the beautiful organization and perfect instruction of their etât major: but even without knowing any thing of the history of the French army, an attentive perusal of their military authors, would at once point out the forte of their military establishments.

The French are an essentially military nation, (we must not confound the term military and warlike, which has a very different signification;) it is this *esprit militaire*, and their excellent military literature, which render it an easy matter to organize and maintain an etât major, which is at least not surpassed in Europe. It is to this corps, we must repeat it, that most of the French laurels are due.

We have already observed, that the French infantry possesses no acknowledged superiority over those of the other European nations; and if we admit their artillery to be on a level with that of Prussia, it is the utmost which can be said for it. We now come to the cavalry. Here is the weak point: neither in matériel or instruction can the French cavalry be compared for a moment with that of either Austria or Prussia; in point of bravery they are certainly not behind their brethren of the infantry. "Brave comme nos cuirassiers," was a common phrase in the Imperial army; and still Napoleon thought less of his cavalry than of any other arm. It requires no very superior sagacity to discover the deficiencies of the French cavalry at the present day; and if we refer to the history of the last century, we shall also find that they did not play any conspicuous part, at least comparatively speaking. It is however remarkable, that the French army should have produced many very excellent cavalry generals; and their deficiency in this arm has been more than once compensated for by a judicious employment of cavalry masses at the proper moment.

The battle of Marengo was decided by a cavalry charge of this sort; and however indifferent the French cavalry may be in point of horses and horsemanship, the use of cavalry is perfectly understood by the etât major. The difficulties of obtaining in France remounts for the cavalry has been a matter of political calculation, and we shall therefore pass it over, and proceed to state the period of service of all arms.

This, amounting to eight years, is sufficiently long to insure the perfect instruction of the soldier, and to afford a reasonable amount of service to the state, without being, on the other hand, oppressive to the soldier himself, or detaching him for ever from civil duties and feelings. For cavalry and artillery, perhaps, ten years should be the minimum, as the soldier of these arms costs more, and must be considered as a recruit for at least a year longer than in the infantry; eight years are, however, quite sufficient to enable the regiments to select and form a good succession of non-commissioned officers.

To sum up in a few words the state of the French army, we may say—infantry and artillery good, cavalry deficient in number,* organization, and matériel; etât major excels in number, organization, and instruction.

The light troops are not in any way remarkable; the light cavalry is even more deficient than the heavy; the Tirailleur corps have been but recently organized on the model of the German Jäger corps.

* Not much more than one half of the cavalry appearing in the returns are in reality efficiently mounted.

PRUSSIA.

Let us now attempt the passage of the Rhine, and pass the troops on its right bank in review, selecting the direct road to Berlin, and crossing over the long bridge at Coblentz. In Prussia, the term of service in the line is limited to the period considered to be absolutely necessary for the instruction of the soldier in his several duties; this is, for the infantry one year and a half under arms; the cavalry, artillery, and guard regiments serve three years; at the expiration of which terms the soldier returns to his home, remaining disposable until after the completion of the fifth year from his first enrolment, when he enters the landwehr, which is, in fact, the reserve of the army.

Economy is the principle of this system. It is considered necessary to have at all times a large available and well-instructed army, while, on the other hand, the least possible expense in the attainment of this object has been aimed at. The Prussian system is, in fact, a great politico-military experiment, which, founded on the principle of German national independence, has for its double object, the complete and efficient defence of the Fatherland, coupled with the greatest possible alleviation of the burdens necessarily attendant on a standing army.

Bearing this in mind, we cannot reasonably expect that the Prussian army of the line should be any thing more than a mass of recruits, and, looking upon them as such, we must confess that their performances on the parade-ground, and in their exercise-camps, exceed any thing of the kind hitherto attempted.

Having had frequent opportunities of seeing the detail of instruction in the cavalry, as well as the other branches of the service, we are justified in hazarding an opinion, and must pronounce their riding-school, and whole system of cavalry instruction, to be the most perfect, which, under the circumstances, can be supposed to exist.

Several British officers have of late spoken and written in high terms of admiration of the general appearance and creditable manœuvring of the troops lately concentrated at Bonn; but most of these gentlemen seem to have overlooked the fact, that of the entire infantry of the line but very few privates were older in years than twenty-one and a half, and, in service, that less than one-half were soldiers of one and a half year's standing.

The cavalry and artillery of the line were one and a half year older, as will be understood from what we have already mentioned; and nearly one-half of the troops present on that occasion have been subsequently dismissed to their homes, immediately on the termination of the manœuvres, and their places supplied by raw levies.

This will be sufficient to show not only that the system pursued must be good, but also that the instructors of the private soldier do their work skilfully, zealously, and efficiently. In fact, there does not exist any body of officers better instructed, both theoretically and practically, than the Prussians; their etât major is equally well organized with that of the French army, but not nearly so numerous. A combined system of instructions and examinations insure to every Prussian officer the means of acquiring a perfect knowledge of his profession, and to the Crown the certainty that the individual has qualified himself for the promotion, which is never granted except on these conditions.

The landwehr troops are exercised in their own homes, by officers appointed for that purpose, and a time is chosen for their instruction which does not interfere with their ordinary occupations. The entire of the landwehr cavalry are lancers, and heavy; they are not permanently mounted, but a registry is kept of all horses fitted for the service, which are hired for the annual reviews, and, in the event of a war, bought up by the Government at certain fixed prices.

If the Prussians (or rather the subjects of the Prussian Crown, for, properly speaking, there exists no Prussian nation,) do not possess the same national *esprit militaire* which is so apparent in France, still there exists in the Prussian army a high military feeling; the memory of Frederick the Great acts, even at this day, as a potent talisman, and the military literature of Prussia bears at this moment the stamp of his excellencies and faults as a commander. The German national charcter is well known to be laborious and persevering. This people excel as commentators and speculative philosophers; even their military science has a certain tinge of pedantry, and few of their generals have been quite free from this fault. But it is almost superfluous to go into further details respecting our allies in the campaign of 1815, and the sharers in the glories of Waterloo. It is since that period, however, that the present system has been brought into full operation, which may serve as my apology for having dwelt so long on the subject.

We have borrowed largely from the Prussian system of tactics, and especially of our infantry drill. As but too often happens in such cases, we have copied too closely, *sans chercher le principe*. The laborious and intolerable drill which is inflicted on the recruit can only be justified by the one and a half year's service of the Prussian soldier, if, indeed, any excuse can be made for a system which contains within itself the germ of disgust to the service, and incitement to desertion. Can this be necessary for the soldier of unlimited service; or is it good policy? The best informed have decided these questions in the negative.

But let us advance a step farther, and inquire what precautions have been adopted for the purpose of mitigating the severity of drill to the Prussian recruit, and whether we have taken any similar steps.

The drill-instructor in Prussia is always an officer, and a guarantee is thereby given that no unnecessary or injudicious severity will be used towards the recruit, either from ignorance of the principles of instruction, or want of capacity to communicate it cleverly and simply, both of which deficiencies, to be naturally expected from the less educated and refined sous-officier, lead but too often to brutal and injudicious treatment. In Prussia, every officer performs his share of this duty, and the extraordinary effects which result can only be explained or accounted for by that simple principle in philosophy—many hands make light work.

Let us now give, in a few words, a summary of the Prussian *état militaire*. All branches of the service are well instructed, their equipment is neat and creditable, their matériel good, and their cavalry well mounted. But the chief characteristic is the high standard of military education of all grades of officers, which is better provided for and insured than in perhaps any other army in Europe, and all these advantages are combined with the wisest and most just economy. On the other hand, so far as concerns the private soldiers of the line, it is but an army of recruits, backed, it is true, by a most powerful and immediately organizable body of well-instructed reserve. We do not presume to criticise this system, which has been adopted by some of the wisest military men of the continent. We would merely observe, *en passant*, that the objections to it are more of a political than a military nature: we have but little confidence in any system of national guardism, to which this seems an approach.

Of the smaller German States, it is unnecessary to say much. Hanover possesses the best cavalry of the Confederation. We have incorporated the plans

of their riding-school figures into our cavalry regulations. *Præterea nihil.*

Wirtemberg has a well-instructed and creditable little army. Bavaria has sixteen men per company under arms. The revenues of that kingdom are absorbed in mortar and stucco-plaster. But here we have arrived at another frontier.

AUSTRIA.

In what outward signs shall we seek the type of the Austrian army? In the noiseless and powerful stream of "the deep rolling Danube," or in the innumerable quarterings of the Austrian arms? We do not find in either the French or Prussian armies that nationality or provinciality serves a basis for the organization of particular arms or branches of the service, if we perhaps except the French artillery, the great majority of which corps consists of French Germans from Alsace and the other provinces bordering on the Rhine.

This was to be expected *à priori*, as there exists no very distinguished natural features in either of these two countries. Civilization has done its work in assimilating, in a great degree, the different provinces of each of these countries respectively. In Austria the contrary is the case: there is an immense difference in the physical conformation of the Tyrol and Hungary, of Styria and Poland, of Bohemia, Austria Proper, and the Lombardo-Venetian kingdom.

The Alpine cliffs of the Tyrol, covered with chamois, form natural Jäger, as do also the rugged and mountainous military frontier, and the wooded and game-stocked acclivities of the Bohemian border. Again, the wide pusztas of Hungary and the plains of Poland furnish a light cavalry, which is educated from childhood in the saddle. These countries, also, produce precisely the description of horse suited to the hussar and uhlan.

On the other hand, the cultivated plains of Austria, Bohemia, and Moravia, furnish well-fed, sturdy, and powerful horses and men for the heavy cavalry; while from all these countries are selected one of the finest and most imposing bodies of infantry of the line which the traveller meets between the Atlantic and the Euxine. But there is, further, an immense diversity in the education, the habits, and the nature of all these different tribes, which fits them more especially for one or the other branch of service more exclusively; and even if the Austrian military system were otherwise undeserving of attention, the wise and judicious manner in which these national peculiarities have been turned to account would claim our most unqualified admiration.

In order to enable us to form a correct judgment of the *comparative* efficiency of the Austrian army, it will be necessary to state some few particulars relative to the mode of recruiting and the duration of service; and for this purpose we must consider it under three distinct heads, there being in fact so many distinct systems in different parts of the monarchy.

We shall commence with those regiments and corps which are recruited in what are called the "Erb Staaten," or family possessions of the house of Hapsburg, and which form, in fact, the bulk of the empire; Hungary and the Italian dominions forming, respectively, the other two divisions. In the Erb Staaten, all non-nobles are subject to conscription, and the period of service is fixed at fourteen years in the line. These provinces are divided, as in Prussia, into regimental districts, called "Wertbezirke," which are named after the different infantry regiments which they are intended to supply with recruits. The cavalry recruits are first selected from the quota of each year, and for this purpose a cavalry officer must be a member of the assenting commission. The number necessary for the special corps—artillery, sappers, and miners, pontoniers—is next selected, having due regard to the degree of education and previous trade of each individual; the remaining recruits go to the infantry. The Tyrol furnishes only one regiment of Jäger, consisting of four battalions.

Each infantry regiment has three battalions, of which the third is always left as a recruiting depôt in the Wertbezirke. If an augmentation of the army be necessary at any time, a first, and sometimes even a second, landwehr battalion is organized. Those soldiers who have completed their term of service, fourteen years, in the line, are then transferred to the first landwehr battalion, in which they remain three years; after which period they belong to the second landwehr battalion, which is, however, seldom called out, except in cases of extreme urgency, and they even then are supposed only to act as "fencibles," being never sent out of their own district.

There is no cavalry landwehr, as in the case in Prussia. All soldiers, who have served fourteen years in the cavalry of the line, become disposable for the infantry landwehr. The artillery have a second establishment, called garrison artillery, to which they are transferred, after having completed their period of service in the field artillery, or on becoming "half invalid."

The Hungarian portion of the army is placed under somewhat different circumstances. Until 1830 the Hungarian soldier was, like the British, obliged to serve for life, nor was there any regular conscription, which has only been introduced within a few years; the term of service is now fixed at ten years, and there is no landwehr organization. Each regiment of three battalions has, on the war establishment, a reserve division, consisting of two companies, which is intended to supply the place of a depot. The cavalry regiments of the entire army have, under similar circumstances, a reserve squadron for the same purpose; and, during the last war, two or more divisions of velites were attached to each Hungarian hussar regiment; the velites' divisions were somewhat similar to the landwehr of the infantry.

The Italian soldier is the most favored in point of duration of service—the term of eight years, introduced by Napoleon, has, as also the French system of conscription, been suffered to remain unchanged. The Italian regiments have no landwehr battalions; the third battalion of each regiment remains in the Wertbezirke as recruiting depots.

Austria has a great advantage in possessing a standing army composed of seasoned soldiers. If we reckon two years as the recruit period of each individual, we find that one-fourth of the Italians, one-fifth of the Hungarians, and one seventh of the other regiments, are recruits, excluding, of course, the landwehr, all of whom are veterans; and if we further take into consideration the operation of the third battalions, it is evident that the first and second field battalions contain no recruits whatever.

In this respect, there is a decided superiority over the Prussian system, and it is this circumstance which has always given to the Austrian cavalry its decided and acknowledged superiority. On the other hand, it must be acknowledged that the Prussian and French peasant—that one from his superior general education, the other from his inborn *esprit militaire*—is more easily formed into a soldier; but neither Prussia or France posseses national jäger, national hussars, national Uhlans, or national frontier troops.

With respect to the education of the officer, we are inclined to believe that the system of examination of the Prussian army has rendered military knowledge more general than in Austria. But the regimental cadetships, the periodical conduct lists, and the examinations which, although not officially or-

ganized, still do, *de facto*, exist, together with the regimental schools, have diffused a very respectable proportion of military science amongst Austrian officers, especially in the infantry.

As in Prussia, the officers of all ranks are the instructors of the private soldier; and in this respect the regimental cavalry officers in Austria are perhaps superior. The average promotion in Austria is much more rapid than in the other two countries, and there is, perhaps, no army in Europe which has a larger proportion of young field officers.

To resume, in a few words. Austria has unequalled cavalry, both light and heavy; indeed, her light troops of all descriptions are superb and highly efficient; the infantry is good; the artillery well organized and scientifically instructed; but rather deficient in the form of their matériel, which is too heavy. As pyrotechnists, the Austrian bombardier and rocket corps have attained great perfection; and in rapidity of movement and firing, notwithstanding their heavy gun-carriages, the cavalry batteries may challenge inspection.

Officers who understand their profession thoroughly, will not find this picture overdrawn: but it may be objected, how is it, with such good materials, that the Austrian army has had so much misfortune in the field? This is a question which deserves a short investigation.

In the first place, if we study the campaigns of the Napoleonic period, we shall find that the Austrians were only beaten by the Great Master himself, and seldom, if ever, by even his best generals; indeed, in the campaigns of 1796 and 1799, victory was almost invariably on the side of the Austrians; but if we then look to the history of the French army, we shall find that it was subsequent to this period that the French etât major acquired that decided superiority which it has since possessed. Here then, and not in any superiority on the part of the French soldiers, will be found the causes of the two successive occupations of Vienna.

It has puzzled many non-military historians and politicians to account for the very advantageous terms which Austria always succeeded in obtaining, even after her most disastrous campaigns; but this mystery may be solved by a moderate acquaintance with facts.

The Austrian army was outgeneralled and beaten, but never disorganized. One heavy blow after another was inflicted on it; but there is a principle of heartfelt devotion to the monarch and fatherland, fresh and vivid in the ranks of the Austrian army, and amongst the Austrian people, which always allowed the baffled general to rally his beaten forces in less time and space than would have been possible for any other army on the continent. It is for this reason that we compared the Austrian army to the Danube.

The Austrian army has never been annihilated and dispersed like the Prussian; and the proof of this assertion is to be found in the treaties of Campo Formio, Presburg, Tilsit, and Erfurth. There exists, as we have already said, a principle of attachment to the monarchy and its old institutions, which enabled the Austrian army to lift up its head after the heaviest blows; but it is to even this very spirit of immobility which pervades all branches of the State, and all departments of the Administration, that many of these same reverses were owing.

An absurb idea prevails, that all the misfortunes of the Austrian armies are to be attributed to the Aulic Council. We do not mean to go the length of asserting that this body is faultless; but we are fully prepared to assert, that this same much-maligned Aulic Council is an exceedingly well organized and efficient military body.

We must recollect, that the most decided reformer of the last century was the Emperor Joseph; and the evils which were produced by his premature and ill-timed, although otherwise good measures, had the effect of throwing Austria into a dogged and stubborn system of opposition to all improvements. It was this spirit of opposition to all, even the most unexceptionable new measures, which, filtered through the Aulic Council from the ministers of State, and spreading downwards to the chiefs of the army, prevented the adoption of the new system of warfare brought into play by Napoleon, and consequently checked the organization of an etât major, worthy of the excellent troops comprising the Austrian army.

It is in this very same point that the Austrian army is at this moment deficient; and the same incubus, the fear of responsibility, still paralyzes every department of the State. The mighty shade of Wallenstein must be propitiated before a more vigorous spirit can be hoped for in the Austrian general staff.

It is difficult to describe exactly the feeling which is engendered by the prevalent system, or to give an idea of the system itself. Two anecdotes, related by persons in whose veracity unbounded confidence may be placed, will best serve to elucidate the matter.

Some years ago a cavalry regiment was called to take its turn of duty at Vienna. The colonel fell into a perfect fever of fear of responsibility, and determined on equipping and dressing his regiment according to the precise letter of the regulation, which he conceived to be the best means of escaping all possibility of blame. It is, and has been, the practice, especially in cavalry regiments, to adopt, unsanctioned by the higher authorities, certain alterations, which either are, or appear to the Colonel to be, improvements; and hence it happened that no regiment had been seen at Vienna equipped exactly according to the regulation, at least for a long period. On the eventful first of May the regiment in question was formed on the Glacis, and, according to custom, the emperor in person inspected it. The colonel, quite certain of receiving a great deal of praise, (for the regiment was otherwise in excellent order,) advanced in his best gallop to make his report. To his dismay, he was informed that His Majesty was so horrified at the appearance of the regiment in the regulation equipment that he would dispense with the future services of the colonel, who was accordingly pensioned within a few weeks. A great number of the senior officers met the same fate for the same offence. So much for the fear of incurring responsibility.

The second anecdote will serve to illustrate another feature of the system, namely, the consequences of being too wise and zealous; and is the converse of the former in some degree.

A certain fortress in Hungary stood in need of a new military hospital. Plans, specifications, and estimates were prepared, and sent up to head-quarters, and, with some trifling alterations, approved of by the directing board of engineers at Vienna. Orders were issued to proceed with the building, and the necessary credit for that purpose given to the local ingénieur director.

The building was finished according to the plans and specifications: but while the work was in progress the officer who had prepared the estimates had been promoted, and another appointed in his place. On the completion of the building this latter officer made a flourishing report to head-quarters, and announced that he had effected a saving on the estimates amounting to no less than 1200*l.* sterling; and, like the colonel above-mentioned, he expected all kinds of praise. But, alas! how vain are all human calculations!—even those of a captain of engineers are no exception to the common rule. The local director received a severe reprimand for having had the presumption to save 1200*l.* on the estimates, and thereby indirectly cast a slur on the wisdom of "the

board of direction." These faults speak volumes, as the phrase is.

From what has been stated, it might be supposed that either there is no separate corps d' etât major in Austria, or that there is a bad one: exactly the reverse is the case. There is not only a corps d' etât major, but an exceedingly scientific one. The mistake is, however, that their path of duty has been chalked out in a wrong direction; in fact, they are not entrusted with the duties which a corps d' etât major is really intended to perform. The Austrian general staff is a corps of ingénieurs géographes—and a very excellent one too; witness the cadastre survey of the monarchy, and the other maps which have been published by that body.

A number of young officers from the different regiments are attached *pro tempore* to this corps, in addition to its own proper establishment, and the individuals are placed in the bureaux at Vienna, where they learn the theoretical and scientific part of their duty. With the exception of a few who are attached to the corps d' armée in Italy and Poland, all these officers are educated for ingénieurs géographes; and when the army takes the field, it has been the practice to complete the necessary staff with engineer officers, or with regimental officers.

But the officer of the Quartermaster General's Department requires a very different education from that received either by the engineer or line officer, in fact something partaking of both; neither does the duty of the ingénieur géographe fit him for the staff. This is well understood in France and Prussia, especially the former country; and hence the superiority which we have already attributed to them.

The staff actually doing duty as aides-de-camp with the generals of brigades and divisions are selected much in the same way as in the British service, excepting that they are always chosen from one or other of the regiments which compose the brigade or division; which prevents the possibility of certain convenient family arrangements, which would otherwise occur to the prejudice of the service.

RUSSIA.

If there exist a ruling principle in the Austrian monarchy which exercises a decided and baneful influence on the army at large, we shall also find that the spirit of the Russian Government is equally prominent in the military system of that country. It is hardly necessary to say, that this principle is the most entire and unmitigated despotism; in this respect unlike Austria, whose Government, if not vigorous, is certainly paternal, mild, and just.

Russia, like Austria, possesses some national troops; but the Russian empire does not exhibit either so many differences of race, or such an endless variety of physico-geographical structure. By whatever names they may be called, the great majority of the subjects of the Russian Crown are Sclaves; and if we except the Poles, there is an equal sameness in point of religion amongst the inhabitants, as in the natural features of the endless forests and steppes which they dwell in.

This furnishes us at once with a key to the Russian military system, which may be described in a few words—unmitigated despotism, and nearly undivided nationality. These are awful weapons in the hands of an unscrupulous leader; and, however we may be desirous of blinking the question, it is not less true that the star of the Sclavish race is at this moment in the ascendant. But here is not the place to enter into a Pentarchist controversy; let us therefore confine our attention more immediately to the subject before us.

It is unnecessary to do more than allude to the national light cavalry of Russia. The Cossaque is too well known to need a description, and his hourra has been already heard west of the meridian of Paris, perhaps not for the last time.

If there be any particular feature in the matériel of the Russian army, it is the immense *surabondance* of good cavalry horses; which is so great, as to allow of whole squadrons being mounted on horses of the same color. Thus, the cavalry regiments have bay, brown, grey, black, piebald, and chesnut squadrons. this is of course nothing more than "playing at soldiers," and can have no effect whatever on the efficiency of the troops.

But there is another feature in the Russian cavalry which claims more attention; we allude to the system of arming one squadron of each regiment, whether hussar, dragoon, or cuirassier, with the lance: having already offered some remarks on this subject, we shall not repeat them here.*

The eye of the cavalry officer, who is accustomed to search more than skin-deep, will easily detect in the Russian cavalry defects which more than outweigh the advantages derived from their unlimited command of horses. The seemingly easily attainable and much neglected minutiæ of the Prussian and Austrian riding-schools, the bitting, the saddling, the packing of necessaries, are doubtless beneath the notice of those great cavalry generals who can carambole brigades and divisions against one another like so many billiard-balls; but, *non obstante*, it is on these miserable and contemned minutiæ that the efficiency of each individual cavalry soldier depends, and, by the strictest logical deduction, that of regiments, brigades, and larger bodies, which, in the end, are only a collection of units.

The efficiency of large cavalry bodies depends as much on the instruction and equipment of each individual soldier, as does the service of a gun or howitzer on the sharpness and *savoir-faire* of No. 1, 2, 3, &c. It is on this point that both Russian and French cavalry break down. Russia has superabundance of remounts, France a deficiency; which difference in their mutual position does not prevent both falling into the same error. It might be easy to point out the cavalry of another power, which, with as good, if not better horses than the Russian, is, in this respect, no whit better.

Infantry is an arm in which rigid discipline and strict drill alone effects more than for any other. Hence we find that the Russian infantry are exceedingly steady, and men being as plentiful as horses in the Russian dominions, it is to be expected that the Russian infantry should be what they are—superb.

The constant intercourse between the courts of Berlin and St. Petersburg, which has resulted from the intermarriage of the reigning families, has facilitated the transmission of all the Prussian systems into Russia, and the result is particularly evident in the infantry and artillery. Every improvement in the *matériel* of this latter arm which has been attained in one State has been immediately transferred to the other; there is, consequently, a great similarity, in many respects, between the Russian and Prussian artillery, both being above par.

The whole of the Russian military force may be divided into two classes: the regular field army, which is recruited from the most populous provinces of the empire; and the local corps, recruited from those districts which, having a very scanty population, cannot afford to furnish more troops than is actually necessary for the defence of the frontier.

The field army is recruited from a population of about forty millions of souls; and there exists a similar organization into recruiting districts as in Prussia and Austria. Each regiment has six battalions, of which four belong to the active army and two to the reserve. The division consists of four regiments, or

*United Service Magazine, No. 139, p. 254, and No. 167, p. 209, *et seq.*

sixteen battalions. Three divisions form a corps d'armée; and Russia has six corps d'armée thus organized. The reserve battalions of all the regiments of each corps d'armée are formed into divisions of reserve, three of which form a corps d'armée de reserve, of which there are consequently two. The battalions of the active army are 1000 strong, those of the reserve 500.

The Russian army is thus organized:* Imperial guards, one corps d'armée, composed of three cavalry and three infantry divisions, with a proportion of artillery, chasseurs, sappers and miners, in all 24 regiments, 11 batteries, and 4 battalions of special corps.

The corps of grenadiers consists of 4 regiments of light cavalry, 24 regiments of infantry, and 17 batteries.

The Imperial guard and grenadiers are somewhat differently organized from the line. The cavalry of the guard have in each regiment 7 squadrons, the infantry 3 battalions. The cavalry regiments of the grenadier corps have 8 squadrons. The infantry ditto have 3 active and 1 reserve battalion.

Next in order follow the six corps d'armée, numbered from 1 to 6; they are each composed of 4 regiments of light cavalry, 48 battalions of infantry, and 17 batteries.

Then come 3 corps of reserve cavalry, each consisting of 24 regiments, and 12 cavalry batteries. Two corps of reserve infantry, each consisting of 72 battalions.

In addition to the above immense force there are the following special and local corps: corps of the Caucasus, corps of Orenbourg, corps of Siberia, corps of Finland.

Troops of the Interior.—10 battalions of sappers; 60 local and garrison battalions; 9 reserve cavalry batteries; 10 local batteries; and, lastly, 146 regiments of Cossaques.

We beg to refer to No. 167 of the magazine for the organization of the Russian cavalry colonies.

The Russian soldier serves fifteen years in the active army, after which period he belongs to the reserve for five years; at the expiration of which period he is permitted to return to his home, remaining liable to be called out, if wanting, for five years more.†

With such an immense army, and so perfect a system of organization, it may be concluded that the generality of Russian officers possess a competent degree of military knowledge, and in this respect they are not deficient. There is a spirit of individuality in the Russian army, which contributes much to its efficiency; this same spirit pervades every branch of the Government, and renders their corps diplomatique the most formidable in Europe. The army has no idea beyond the emperor, and acts therefore as one man. So far as mechanism goes, nothing can be more perfect than this; but what can the spirit of a corps d'officiers be, each of whom is liable to degradation to the rank of private soldier, at the caprice of the emperor or by sentence of court-martial? How can we expect a high feeling of honor where such a system is in force? and although honorable feeling does not imply the possession of high military attainments, still we can scarcely imagine a good officer to be deficient in the true spirit of soldierly pride.

A limited space obliges us to bring this paper to a close. We would, however, beg to call attention to one or two points connected with the organization of the continental military—the principal of which is the reserve organization of Austria, Russia, and Prussia. This latter power has carried the principle of reserve to an extreme, as the reserve, or landwehr, is in fact the army; while the line is, as we have seen, only an immense school. England is the fifth great power, and possesses nothing like the reserve resources of the others.

Again, in all the continental armies every officer is an instructor; this leads to a necessity for the acquirement of military knowledge, otherwise little likely to be sought for by the many. Further experience of the series of campaigns which began with the Revolution and were closed by the battle of Waterloo, tend to prove that numerical and personal bravery do not always compensate for deficiency in the scientific knowledge which renders the former qualities available. Austria and Prussia, with better organized armies in some respects, were beaten by the revolutionary rabble of France, who gave fair play to genius and encouraged science.

Russia escaped better from the conflict, in consequence of the talent of Suwarrow. And in the end, when all three powers had learned the trick, (to use a vulgar phrase,) they were enabled to make their numerical force available, and France succumbed in her turn from want of *matériel*. The struggle of competition in military science is going on at this moment on the continent: it is worthy of our attention.

Having gone through the details of the four great military powers, we shall proceed to place before our reader a tabular view of the comparative cost to the country of the infantry soldier of each of the five great powers. Even if there be some slight inaccuracy in the individual figures, the relative proportion is tolerably correct: we have extracted it from Marmont's book, so often referred to:

In France, the infantry soldier costs			340 francs.
Austria,	"	"	212 "
Prussia,	"	"	240 "
Russia,	"	"	120 "
England,	"	"	538 "

To which table, we beg leave to append the following note of the same author: "According to this calculation, it results that the sum which each infantry soldier costs the country, in England, France, Prussia, or Austria, and respectively, would support, in Russia, four and a half, three and ten twelfths, or two, or finally one and twenty-five thirtieths soldiers." The difference is still greater for the cavalry soldier.

Human Petrefaction.—A young medical student of the name of Mecedelia, of Verona, in Italy, has been making some of the strangest experiments conceivable. They are no other than the *petrefaction of the human body.* A friend has informed us that the same discovery had been made six years previously, but that the artist died suddenly without leaving behind him any clue to the secret. It is well known that the King of Naples has in his palace a table entirely composed of different parts of the human body petrified, and polished precisely as marble or any other kind of stone might be. A remarkable circumstance is, that all the natural colors of the skin, arteries, veins, muscles, bones, &c., and all the states of disease causing death, are unalterably preserved.

Pompeii.—The *Frankfort Journal* of the 10th inst. states that the last excavations made in the street of Fortune, at Pompeii, brought to light a number of paintings in fresco, which were affixed as an ornament to four adjoining houses. One of these paintings was remarkable for the extreme correctness of its design, and for the freshness of the coloring. The subject of this painting is Bacchus and a faun pressing grapes, which are borne by a young slave, whilst the child is pouring wine into a vessel fixed in the earth.

* The following details are taken from Marmont.

† Since the above was written a ukase has appeared, limiting the term of service to ten years, in consequence, as it is said, of the immense increase of desertion in the Russian army.

NEW PROJECTILE.—The Albany Evening Journal gives an account of a new description of hollow shot, the invention of Messrs. Scott & Burdick, mechanics of that city. A number of experiments have been tried in the presence of General Wool, Major Baker, and other officers of the army, the shells being loaded with a composition which explodes them at the instant of striking any object at which they may be aimed. The Journal thus describes one of their experiments:

A 24-pounder howitzer was placed on one side of a hollow, and a target on the opposite side of the hill, distant, perhaps, 250 yards. The target, composed of heavy timber, was eight feet square and thirty two inches in thickness. One of the projectiles, in appearance precisely like a solid ball, was then placed in the cannon and the piece fired. The shot passed through the upper timber of the target and glanced off, but *without* exploding. A second and third was made, but with no better success. It was then stated by the inventors, that in preparing the shot for the day's experiment they had changed the proportions of the charge, and they could account for their failure (the *only* one that they had met with in *the entire range of their trials*) on no other ground than the supposition that there was too much powder in the shell to allow the composition to take effect. Search was then made for the shot which had been fired, and two of them were found, unbroken, in the side of the opposite hill. It was proposed to try these shot a second time, and they were accordingly placed in the cannon and fired, one after the other, and in both instances with perfect success. The first shot passed *through* the target and exploded as it rebounded into the air, the interval between the impact and the explosion being nearly a second. The second shot struck fairly in the centre of the target, and exploding in about half a second after impact, tore the target into a thousand fragments.

The effect of this single shot upon a large ship would have been to sink her almost instantaneously, and exploding in or near a body of troops it would have proved awfully destructive. This result establishes the *efficiency* of Messrs. Scott and Burdick's projectile. Of its safety in handling and packing they gave the strongest assurances, though no means were at hand of testing this point thoroughly. But a doubt had been cast upon the *certainty* of these shot by the failure of the first three trials. The inventors met this objection by the averment that out of a great number of experiments, these were the only ones that had not succeeded perfectly, and they attributed the failure to the change which they had that day made in the charge. They expressed the most undoubting conviction that these failures could not recur. We hope, as we verily believe, that Messrs. Scott and Burdick will be fully justified by results in the confidence which they entertain of the merits of their invention. A more effective missile we certainly never saw. And as the inventors have exhausted their private means and spent a great deal of valuable time in perfecting their shell; we sincerely trust that they will be so far able to satisfy the General Government of its value and utility as to obtain some substantial remuneration for their outlay of capital and labor.

The military officers and citizens of Albany, have asked of the New York legislature, an appropriation to erect a monument to the memory of Col. MILLS, who fell at the head of his regiment, in defending Sacket's Harbor from an attack of the British army, in the spring of 1813.—*Exchange Paper.*

Correspondence of United States Gazette.

NEW CASTLE, DEL., *March* 14, 1843.

SIR: The steamboat upon the new principle of construction of Capt. William Robinson, was launched yesterday morning.

It is constructed without the aid of timbers, bolts, spikes, copper fastenings, or trenails, being hooped up, after the manner of building a hogshead, with burs or nuts upon the tops or screw parts of the hoops to slacken or tighten them at pleasure. This mode of building supersedes the necessity of caulking, and makes the boat completely water tight; another boat constructed after the same manner has been running for eight years, to New York, Baltimore, and other places, and has never leaked during the whole of that term three gallons of water. By Captain Robinson, and men of science who have examined this boat, her strength is believed to be under any circumstances in which she may be placed, greater than that of boats built in the ordinary way. The expense of this mode of building is about one-third less than the old mode. The saving of room, which, in the other boats is taken up with the timbers, and the necessity of ceiling or lining is entirely done away with. To-day the boiler for the engine was put on board, and her speed, it is calculated, will not be less than twelve miles per hour. When finished, she will make an experimental trip to your city. By universal desire of the citizens of this place, she was called after her inventor, "William Robinson." Below I give you the dimensions of the boat from actual measurement. Length of deck 85 feet, depth of hole 6 feet, breadth of beam 12 feet exclusive of guards, breadth of beam including guards 21 feet. K. B.

HYDROGRAPHICAL OFFICE.

WEATHER JOURNAL FOR THE WEEK ENDING SATURDAY, MARCH 18, 1843.

Days.	Barometer.	THERMOMETERS. Att.	Sun.	Rad.	Shade.	W. Bulb.	Dew Pt.	Weather.	Portion cloudy.	Winds.	Force.	Rain, inches.
Monday, 13th, 3 A. M.	30.020	62°	-	-	32°	30°	28°	Rain.	.10	N. E.	.52	
Do. 3 P. M.	29.786	65	-	-	39	35	34	Nimbus.	.10	N.	.13	
Tuesday, 14th, 3 A. M.	30.101	58	-	-	24	21	11	Clear.	.00	W.	.76	
Do. 3 P. M.	30.178	62	-	22°	39	34	10	"	.00	"	.26	
Wednesday, 15th, 3 A. M.	29.944	57	-	71	36	31	12	Cirrus stratus.	.4	South.	.26	
Do. 3 P. M.	29.960	62	66°	-	5	39	28	Nimbus.	.6	N. W.	.52	
Thursday, 16th, 3 A. M.	30.184	57	-	55	42	31	22	Cloudy.	.10	North.	.26	
Do. 3 P. M.	29.746	66	-	-	36	28	28	Snowing.	.10	N. N. E.	.26	
Friday, 17th, 3 A. M.	29.536	52	-	-	29	24	22	"	.10	North.	.52	
Do. 3 P. M.	29.786	56	-	72	36	30	18	Clear.	.00	N. W.	.13	
Saturday, 18th, 3 A. M.	29.886	57	1	15	32	21	11	"	.00	Calm.	.52	
Do. 3 P. M.	29.816	51	55	56	31	25	15	Cumulus.	.8	N. W.	.39	

Maximum variation of the needle, March 17, at 20 h. Gottingen time, 1° 38′ 04″ 75.
Minimum, " " 14, at 2 h. " " 1° 25′ 02″ 25.
Mean daily variation for the week, " " " " 07° 51′ 58″

12.000 .45

WASHINGTON.

THURSDAY, MARCH 23, 1843.

Loss of the U. S. Ship Concord.—The painful rumor of the loss of the ship *Concord* is confirmed. A letter from Commander Conover, of the U. S. ship *John Adams*, dated Table Bay, Cape of Good Hope, December 26, 1842, published in the Madisonian, gives the following particulars:

"The Portuguese brig Union arrived here a few days since, with the surviving officers and crew of the U. S. ship Concord—the officers and men under charge of the 1st Lieutenant, Mr. Gardner, who has officially communicated to me the loss of the Concord. She was wrecked on a sand bar at the mouth of the river Lorango, in the Portuguese province of Quillemane. Captain Boerum, Purser Hart, and James Davis, ordinary seaman, were drowned on the 2d November, while crossing the bar at the mouth of Lorango river, in the gig. I have taken five midshipmen and sixty men on board the John Adams. The remaining officers and crew will proceed immediately to Rio de Janeiro in the Portuguese brig which conveyed them to this place. The Concord, after throwing over her guns, &c., to lighten her, was forced over the bar at high water with loss of rudder, keel, &c., and otherwise materially injured, though not a complete wreck."

U. S. Ship Saratoga.—Considerable anxiety has been felt for some days for the safety of the new and beautiful U. S. ship *Saratoga*. She left Portsmouth, N. H., on the 16th instant, at noon, to proceed to New York to complete her outfit for the African squadron. During the night she was compelled by the violent storm to anchor at Rye beach, to prevent being driven ashore. The masts had been all cut away; but by the latest accounts it was thought her hull was safe. An officer had been despatched to Boston to procure a steamboat for the purpose of towing her into the harbor, and several vessels had been stationed near her to afford relief in case of imminent danger; so that no fear need be felt for the safety of the officers and crew.

We have since learned that she has been towed safely back into the harbor of Portsmouth.

Commanders W. H. Gardner and R. B. Cunningham have been relieved from serving as members of the Naval General Court Martial, ordered to convene at Norfolk, on the 25th inst., and Commanders W. Jamesson and C. Lowndes have been detailed in their stead.

The steamer *Missouri*, Captain J. T. Newton, arrived off the mouth of the Eastern branch on Saturday afternoon, having made a fine run of eighteen hours from Norfolk, during a part of which time a heavy gale was blowing.

The frigate *Brandywine*, the flag-ship of Commo. F. A. Parker, bound to the East Indies, dropped down on Sunday morning last, from the navy yard to the naval anchorage at Norfolk.

We have been compelled slightly to abridge, for want of room, the articles on the following pages in defence of the U. S. Military Academy; but not, we presume, so as to weaken the force of the argument.

List of privateers fitted out by the Province of New York in the war of 1755:

	No. of guns.	No. of men.
SHIPS.		
Sturdy Beggar,	26	200
Wolfe,	24	200
Blakeney,	20	150
Hercules,	18	140
Colonel Prevost,	20	150
Royal Hunter,	20	150
King of Prussia,	18	140
Duke of Cumberland,	16	140
Oliver Cromwell,	16	140
St. George,	16	140
General Johnson,	16	140
Tartar,	16	140
SNOWS.		
Boscawen,	16	130
Royal Esther,	16	130
Cicero,	14	120
Prince Ferdinand,	14	120
Abercrombie,	14	120
Greyhound,	14	130
Revenge,	14	130
Neptune,	14	120
Hornet,	14	120
BRIGANTINES.		
Earl of Loudon,	14	120
Johnson,	14	120
True Briton,	14	120
King George,	14	120
Hawke,	14	120
Prince of Orange,	12	110
De Lancey,	12	110
Mary,	12	110
Hope,	12	110
Charming Sally,	12	110
Duke of Marlborough,	12	100
George,	12	100
Prince George,	12	100
New York,	12	100
Columbine,	12	100
Schooner Sampson,	11	100
Barque Decoy,	6	40
SLOOPS.		
Goldfinch,	12	100
Squirrel,	12	100
Fox,	14	100
Catharine,	12	100
Hardy,	12	100
Prince Edward,	10	40
Harlequin,	10	50
Bradstreet,	8	40
Tyger,	8	40

Official.—The Board of Naval Surgeons, recently convened at Philadelphia for the examination of such Assistant Surgeons of the Navy, as had permission to present themselves, have reported the following as qualified for promotion, viz:

Assistant Surgeon James C. Palmer, to stand on the register next after Passed Assistant Surgeon Charles A. Hassler.

Those examined, whose commissions bear date 9th February, 1837, to stand thus:

No. 1. John L. Fox.
No. 2. C. F. B. Guillou.

Those examined, whose commissions bear date 6th September, 1837, to stand thus:

No. 1. John T. Mason.
No. 2. Charles D. Maxwell.
No. 3. Edward J. Rutter.
No. 4. John J. Abernethy.—Commission dated 9th February, 1837.
No. 5. James M. Smith.
No. 6. Charles W. Tait.—*Madisonian.*

From the New York Journal of Commerce.

U. S. MILITARY ACADEMY.

Much notice has been taken of late, in the public prints, and even by some of the State Legislatures, of the United States Military Academy in West Point—enough to show that very erroneous notions are entertained of its true objects, and very little is known of its true nature. Believing that my fellow-countrymen ever desire, and only need correct information on any subject regarding their own interests, to enable them to form just conclusions, I have thought that a plain statement of facts on one of so much importance as this, would not be unacceptable.

A belief in the necessity of our possessing, in the persons of our own citizens, a due degree of military science, and of our having the means of increasing it as the wants of the country might demand, induced Washington earnestly to recommend the establishment of a Military Academy. To the administration of Jefferson it owes its first organization in 1802, when it was enacted "that the corps of engineers [then containing ten cadets] shall be stationed at West Point, and constitute a Military Academy;" the same act providing that all its officers, including the cadets, "shall be subject at all times to do duty at such *places*, and on such *service*, as the President shall direct." (See act approved March 16, 1802, sec. 27.) It was increased to its present state during the administration of Madison, by the enactment, that "the cadets *heretofore* appointed in the service of the United States, whether of artillery, cavalry, riflemen, or infantry," *and at that time doing duty with their respective regiments or corps*, as well as those "that may in future be appointed," "may be attached as students to the Military Academy." (See act approved April 29, 1812, section 3.) Any person who will take the pains to examine this and other laws of Congress on the subject, will learn that the term *cadet* is applied to an officer in our army of grade intermediate between that of the commissioned and non-commissioned officer, and corresponding to that of midshipman in the navy; a grade through which, in ordinary cases, all officers of higher rank are required to pass. He will also learn that the object of establishing and increasing the Military Academy was simply to collect, at a convenient and central military post, a body of young and inexperienced officers, then in service, and there compel them to devote their time and all their pay to the acquisition, under competent instructors, of that information which is absolutely necessary to fit them to discharge their duties as soldiers; that, so far from its being a mere school, at which young men are educated at the public expense, afterwards to be appointed in the army, it is to be regarded in the very same light as would be the collection of the officers of any other grade, or even of any number of companies or regiments, for a similar purpose.

Destroy the academy, and the cadets would be merely restored to their situation previous to 1812, scattered with their regiments over the whole extent of our frontier, and frequently shut up with one or two companies at military posts beyond the bounds of civilization, with no means of acquiring information out of the mere routine of company drill. Thus left to their own guidance, they would dream away an existence of no profit to themselves and of positive injury to Government. It is this very feature, peculiar to our military service, of almost total insulation, in small bodies at detached posts, that renders some central position, as a school of instruction, of so much importance to our army. It is to be presumed that for considerations like these, such a school has been fostered and cherished by every President and Secretary of War to the present time.

The want of it compelled our Government to employ, in the construction of our public works, several foreign officers of distinction; among others, one who, for a long time, was our principal military engineer, and who, upon returning to France, at the time of the threatened war between that country and this, was at the head of the War Department, in the possession of drawings, and perfectly conversant with the situation, the weak points, and means of defence, of *every fort* on our coast; a species of information of more value to the French Government, in case of actual hostilities, than the whole expense of the Military Academy from its organization to the present hour. That its establishment and continuance will prevent the re-occurrence of this evil, may be inferred from the fact, that, at present, all the officers, with one or two exceptions, of the corps of engineers, ordnance, and artillery, are native citizens, and most of them graduates of the academy.

The number of cadets in the army is by law limited to 260, and these, under the act above referred to, the President attaches to the Military Academy. To supply the vacancies which annually occur, about ninety young men, between the ages of sixteen and twenty-one, are selected by the Secretary of War, generally upon the recommendation of the member of Congress of the district from which there is no cadet. The effect of this mode of selection is, that very nearly a fair proportion has ever been given to each political party, as well as to each portion of the Union—a fact which cannot be affirmed with regard to any other set of appointments made under the General Government. For admission, an ability to read and write correctly, and to perform with accuracy the various operations of arithmetic, with good moral character, and entire freedom from bodily disease or infirmity, are alone required. Thus it is placed within the power of the poorest boy of the land to prepare himself for the situation.

Upon arriving at the academy in June, the candidate commences his duties by being subjected at once to all the particulars of the drill of the raw recruit, who enters the army as a private soldier; and not till he has thus been strictly prepared in every thing required of such recruit, is he permitted to take his place with the others in the ranks of the company. After the admission of the new class, the whole corps of cadets go into a regular encampment, where, without mattresses or beds, save such as can be formed of the common soldiers' blankets, sleeping in tents or in the open air, as they see fit, they remain two months. In the mean time, they are required to drill from four to six hours per day, and to perform, with the utmost strictness, night and day, all the guard and police duties required of the private soldier encamped in the presence of an enemy.

On the 1st of September the corps return to barracks. The new class are arranged into convenient sections for the pursuit of their course of studies, and the entire energies of a large portion of the officers at the academy are devoted to their proper instruction. During the first week of the following January, each member of this class is thoroughly examined by the academic board, composed of the superintendent and all the professors. After comparing the account, which has been accurately kept of the daily recitations, with the results of this examination, the board reject those who have not made proper progress, either for want of industry or capacity, and arrange the remainder in order of merit in each branch of study. These, *after binding themselves to serve eight years in the army*, unless sooner discharged, and taking the same *oath of allegiance* as the commissioned officer and private soldier, for the first time receive their warrants as cadets.

The course of duty and study at the academy occupies four years. When not encamped, as before

stated, the cadets devote the principal part of the time to a course of scientific instruction, both theoretical and practical, purposely prepared to fit them for the duties of officers of one of the corps of our army requiring scientific attainments. This course differs materially from that taught in our colleges, being so much more extensive and thorough as to exclude, for want of time, many of the useful literary branches pursued at those institutions. Each cadet undergoes twice in each year a strict examination by the academic board, and from each class those who fail to come up to the required standard are discharged, unless their failure is due to sickness or some other satisfactory cause, in which case they are permitted to go on with the following class. At proper hours, during all seasons of the year, when the weather permits, the cadets are required to drill, parade, and perform guard and police duties, similar to those of regular troops at ordinary military posts. After the expiration of one year, each class is taught practically in the field the duties of corporals; after two, those of sergeants; and after three, those of commissioned officers—each individual thus serving an apprenticeship in each grade before he is allowed to exercise a higher command.

During his entire term of service, except in extreme cases, the cadet is permitted to visit his home but once, and then only on condition of holding a certain prescribed standing in good conduct. He is not allowed at any time to employ a servant, but is compelled to attend upon himself, to make his own bed, bring water, scrub, and police his own room, &c., and, in fact, to do every thing which may teach him the importance of self-sacrifice and self-control, and the necessity of industrious and economical habits. His pay and allowances do not amount to one dollar per day, and barely furnish the means, with the strictest economy, to meet his expenses for board, clothing, books, instruments, &c.

At the expiration of the four years, it will be found that many who entered have been unsuccessful. That those who have succeeded should, in fact, be the very best, would require a state of perfection in deciding upon merit which man has never yet attained; still, it will not be denied that the Government has thus secured a body of talented, well-educated soldiers, by the operation of a system which has raised an effectual barrier to the entrance into the army of the dissipated and worthless youth of the country, for whom it might be convenient to make provision, when all other sources of occupation had failed. Having thus finished their term of service as cadets, they are arranged finally in the order of merit, based upon their entire course of study, military acquirements, and conduct. Those who come best are promoted to fill the vacancies in those corps of the army which are deemed the most important, and of course, by the true soldier, the most desirable, each taking rank according to his standing thus determined.

This course of things will scarcely be considered *aristocratic*. He who can point out a system wherein real merit would be more likely to rise, or demerit to find its proper level, or, in fine, wherein the bold features of democracy are more prominent from beginning to end, will show a model worthy of all acceptation.

Now, what we would expect as a consequence of this, the army register will show: that, of those who succeed, the poor and industrious form much the larger portion. The restraints, privations, and hard study, which are preliminary conditions of success, are found to be more than many of those who have been brought up in ease and dependence upon the wealth and influence of their friends are able or willing to bear. Numerous instances might be given in which young men, too poor to obtain more than the benefits of a few months common school education, have, by hard labor and steady improvement, under the system pursued at the academy, taken the first honors of their classes, and now occupy important situations in the army.

The foregoing, Messrs. Editors, is a statement of the true situation of the Military Academy, as well as some of the objects and effects of its establishment and support. Can any reasonable mind need other answer to the objections which are daily raised against it? I think not; yet indulge me a little longer while I refer to some of them.

The most indefinite, and therefore the most common, is the one above referred to, "that it is aristocratic." That *it is not so* in its nature or administration, in any objectional sense of the term, I trust I have fully made out. If it were true that its benefits were confined to the sons of the wealthy, of officers of government, &c., the blame should be cast upon *the agents of the people* who make, or are influential in making, the appointments of cadets of the army, and not upon the institution. To the honor of these agents, however, be it said, the charge is not true, as is plainly shown by the official paper giving an account of the parentage, &c., of the cadets present at the academy last year. 'Tis true, that sons of the wealthy, members of Congress, &c., do often obtain appointments in the army, and doubtless would in a much larger proportion if the grade of cadet were abolished, and the barrier interposed by the academy removed. It would be surprising if no merit could be found in them, and unreasonable and anti-democratic that they should be deprived of a fair proportion of the situations under Government. It has ever been a matter of surprise to me that *so few* of the relatives of members of Congress, and of persons of political influence at Washington, should have received appointments. The fact, I think, shows more purity on their part than they get credit for in these days of party virulence.

Another common objection, freely asserted, even by grave legislators, who have surely taken no pains to examine, is, "that those who graduate are under no obligation to serve in the army." The extract of the law of Congress, given below,* puts this assertion in a bad light. Moreover, any one who will read the commission of an officer, will see that it is held by the pleasure of the President, and that no one who accepts it can withdraw from the service without his assent. I do not well see how the officer could be put under stronger bonds, unless the objector would require him to remain in the army *against both his own will and that of the Government*. Forced service like this would hardly be worth paying for. All this outcry about resignations has its origin in the number that occurred in 1836, '37, when the country was mad with the spirit of speculation; and magnificent corporations, by offering to officers from three to six times the annual salary furnished by Government, induced many to yield to the demand for civil engineers. Many of these are now out of employment, and have ample leisure to regret their mistake in yielding a tolerable substance for a very large shadow. The best guarantee that the Government can have for the long and faithful service of the graduates, it has in the fact, that they are well fitted for their profession, and poorly fitted for the ordinary employments of civil life. By their military education military tastes have been created and cultivated, which can be gratified no where else than in the army.

Again: it is said by some, that, to encourage the militia, and by others, to encourage the private soldier, the grade of cadet should be abolished, and appointments to the office of lieutenant made from their ranks. When it is considered that the average number of annual promotions to this office does not now exceed thirty, which would give to some of the larger

* Page 350.

States *one or two* appointments per year, and to the smaller, *one* in *four or five* years, it cannot be seriously urged that the military ardor or discipline of the militia would be materially improved by so uncertain a prospect of obtaining a situation with the salary of $700 per year. Neither will it be contended any more seriously, that the same prospect would induce many young men of proper acquirements and abilities to enlist as private soldiers, for five years, with the pay of $7 per month and one ration per day. Moreover, unless it is to be presumed that the magic glitter of a pair of epaulets is at once to convert officers thus appointed into efficient engineers and artillerists, *they are still to be instructed*, either by collecting them into a Military Academy, as the cadets are now collected, or by leaving them to the uncertain advantages enjoyed by the cadets previous to 1812. This, too, is to be done with persons of more advanced years, who have passed the term beyond which the restraints of school are insufferable.

Still, there are those who, admitting all that has been said in favor, complain of the expense of the academy, and say that the cadet should pay for his own education. If this should be required, and *the poorer class of our citizens thus effectually excluded* from the higher grades of our army, why should not, for the same reason, the corporal, the sergeant, the midshipman, lieutenant, &c., each pay for his? In fact, why, in time of peace, should not the whole army and navy pay for their instruction? For the principal object of keeping them up is, that, by being well instructed and disciplined, they may be ever ready for the defence of the country. And are those who complain of the expense aware that all that would be gained, if any thing, by the abolition of the academy, would be merely the difference between that of instructing thoroughly many in one body, and the same number, indifferently, in detached portions? Or are they aware that the whole ordinary annual expense of the academy, including pay of cadets, is less than that required to keep a single frigate in commission; and only about three times as much as *the amount of salaries alone* now paid to instructors of midshipmen?

Thus, fellow-citizens, I have presented a plain statement of facts, with a few reasonable deductions, regarding the much talked of Military Academy. Does it deserve the unqualified condemnation which some interested persons have succeeded in getting up against it? If so, your will is supreme in the matter. It is a subject of interest to you alone, and you will dispense with it. If, on the contrary, it is a great benefit to our small army; if its influence has been to produce a thorough reform in every branch of our military service; to secure a perfect accountability in all disbursements of public money entrusted to its graduates; if, in fine, the reputation of the officers which it has educated, for scientific acquirements, military bearing, and discipline, is not exceeded by that of any body of young officers in the world—and all this its friends claim for it—you will continue your favor and protection.

AN OFFICER OF THE ARMY.

From the Evening Post.

The following preamble and resolutions, which were passed by the last legislature of Connecticut, and have been, in substance, adopted by the legislature of another State, are in striking and mortifying contrast with the facts which are copied below from the official records of the Government.

RESOLUTIONS OF THE CONNECTICUT LEGISLATURE.

"Whereas, the attention of many of the citizens of this State has for years past been directed to the large appropriations of public money made by Congress, for the support of the Military Academy at West Point, in the State of New York, and as it appears evident to them that a very large proportion of the cadets received into that school are the sons of wealthy and influential men, who, by the interposition of members of Congress, obtain situations in that institution, to the almost total exclusion of the sons of the poor and less influential men, regardless alike of qualifications and of merit; and, whereas, the practice of educating such persons at the expense of the United States, without any obligation on their part to continue in its service after they have completed their educations, or in any way reimburse to the United States the amount expended in their educations, is considered entirely at variance with our views of justice and equality; we are, therefore, of the opinion, that the Military Academy ought to be abolished.

"*Resolved, therefore, by the General Assembly of the State of Connecticut*, That our Senators in Congress be instructed, and our Representatives requested, to oppose all further appropriations for the support of the said Military Academy.

"*Resolved*, That the Governor of this State cause that each of our Senators and Representatives in Congress and the Governor of each State and Territory of the United States, be furnished with a copy of the preceding preamble and resolutions."

PARENTAGE AND CIRCUMSTANCES OF CADETS.

The annexed table will show, in the first column, the parentage and circumstances of the cadets at the Military Academy on the 1st of June, 1842; and in the second column, of those who entered during the month of June 1842:

Sons of farmers,	55	20
" planters,	3	7
" mechanics,	14	8
" boarding house or hotel keepers,	4	1
" physicians,	12	6
" lawyers, judges, &c.,	26	7
" officers of the army,	10	1
" officers of the navy,	3	1
" civil officers of the Government,	5	4
" clergymen,	2	3
" merchants,	18	8
No fathers living,	48	28
Miscellaneous,	21	4
Total,	221	98

Of those in the first column (221), 182 are represented as being in indigent, reduced, or moderate circumstances; and of that number the families of 144 resided in the country.

Of those in the second column (98), 93 are represented as being in indigent, reduced, or moderate circumstances; and of that number the families of 30 resided in the country.

No high functionary of either the General or State Governments has a son at West Point.

TERM OF SERVICE FOR CADETS.

"Sec. 28. *And be it further enacted*, That the term for which cadets hereafter admitted into the Military Academy at West Point shall engage to serve, be, and the same is hereby increased to eight years, unless sooner discharged."—(*See act approved July 5th*, 1838.)

In conformity with this law, the cadet, on receiving his warrant, binds himself to serve in the army of the United States eight years, unless sooner discharged by competent authority, and at the same time takes the oath of allegiance, which is administered alike to the officer and private soldier.

If the cadet attains the rank of a commissioned officer, he places himself under obligation to continue in the service during the pleasure of the President, which may be for life, if the exigencies of the service require.

AN OFFICER OF THE ARMY.

NAVY.

March. ORDERS.

15—Lieut. Roger Perry, receiving-ship, Norfolk.
Lieut. Wm. C. Chaplin, receiving-ship, Norfolk.
Lieut. J. C. Carter, receiving-ship, New York.
Lieut. A. F. V. Gray, store-ship Lexington.
Passed Assistant Surgeon John J. Abernethy, store-ship Lexington.
Assistant Surgeon James Jeffray Brownlee, receiving-ship, New York.
Passed Midshipman Wilson R. McKinney, receiving-ship, New Orleans.
Boatswain Joshua Bryant, frigate Macedonian.
Carpenter Amos Chick, frigate Macedonian.
Sailmaker Wm. H. Brayton, frigate Macedonian.
Lieut. A. L. Case, frigate Brandywine.
Lt. Chas. Thomas, detached from Brandywine.
3d Assistant Engineer Smith Thompson, jr., detached from steamer Missouri.

16 Commander William J. McCluney, command of ship Vandalia.
Pass. Mid. J. C. Williamson, acting master ship Vandalia.
Boatswain Edward Crocker, receiving-ship, Norfolk.
Boatswain John Hunter, navy yard, Pensacola.

17—Lieut. John A. Russ, navy yard, New York.
Lieut. J. T. McDonough, frigate Macedonian.
Passed Mid. Jas. A. Doyle, store-ship Lexington.
Passed Mid. James S. Ridgely, store-ship Lexington.
Midshipman A. Barbot, store-ship Lexington.
Mid. N. B. Harrison, store-ship Lexington.
Mid. E. Woodworth, receiving-ship, New York.
Mid. Wm. A. Webb, store-ship Lexington.

18—Lieut. G. W. Harrison, frigate Macedonian.
Lieut. George M. Bache, frigate Macedonian.
Purser John C. Holland, navy yard, Boston.
Purser Thomas Gadsden, schooner Flirt.
Master's Mate John W. W. Dyes, appointed acting master's mate and to sloop Levant.

20—Surgeon Samuel Moseley, Charleston station.

21—Lieut. D. McDougal, leave one month, having returned from ship Falmouth on sick ticket.
Boatswain C. Johnston, navy yard, Philadelphia.
Gunner Thomas Ryley, navy yard, Philadelphia.
Carpenter W. Jordan, ship St. Louis, Norfolk.

Naval Intelligence.

HOME SQUADRON.—Brig *Dolphin* at Vera Cruz, February 23. All well. To sail for New Orleans in ten days.

Brig *Boxer*, Lieut. Com. O. Bullus, at Matanzas, March 2, to sail in a few days on a cruise among the Bahamas.

Brig *Bainbridge*, Lieut. Com. Johnston, at St. John's about the 15th or 16th February. Officers and crew well.

Ship *Vincennes*, Commander Buchanan, arrived at St. Jago de Cuba on the 5th February, in twelve days from New York, on a cruise, and was to sail on the 12th. Officers and crew well.

Schooner *Grampus*, off Charleston, S. C., March 9. Officers and crew all well.

PACIFIC SQUADRON.—Store-ship *Relief*, Lieut. Com. Sterett, sailed from Valparaiso on the 1st of November for Callao.

EAST INDIA SQUADRON.—The U. S. ship *Constellation* lately went to Chuempe, where she now lies. Commodore Kearny recently visited the provincial city, and had communication with his excellency the Governor, by letter, through to Kwangheep. The corvette *Boston*, Com. J. C. Long, left these waters for the Sandwich islands and America on the 28th ult.—*Canton Register, November* 8.

Mar. ARRIVALS AT WASHINGTON.

14—Lieut. L. B. Northrop, dragoons, Galabrun's.
Lieut. C. N. Hagner, Top. Engr's, P. Hagner's.

Marriage.

In Portsmouth, Va., on the 16th inst., by the Rev. JOHN H. WINGFIELD, Passed Midshipman FRANCIS ALEXANDER, U. S. N., to Miss ELIZA J., daughter of Commander J. J. YOUNG, U. S. N.

Death.

On Sunday, the 19th inst., ALIDA VAN RENSSELAER, infant daughter of Lieut. Col. CROSS, U. S. A.

TREASURY DEPARTMENT,
Washington, March 16, 1843.

SEALED PROPOSALS will be received at this Department, until the 17th April next, for building the hulls of *one, two,* or *three* Iron Steamers, to be used as Revenue Cutters on the sea coast, of the following dimensions, say: "one hundred and forty (140) feet on deck, twenty-three (23) feet beam, and ten (10) feet hold. Model, drawings, and moulds for building to be furnished by the Department. It is expected that these boats will be built in reference to Hunter's or Ericsson's propellers. The iron used in construction must be American, and of the very best quality, and is to be painted with two good coats of red lead, one before the work is put up and the other after. The whole of said iron work shall be weighed after it is wrought and fitted to its appropriate place, and previous to its being finally put together. Payment will be made according to the nett weight per pound, including coal bunkers, water tanks, and galleys. The chain plates, bobstays, and all iron work necessary to the hull, spars, rigging, sails, and guns will be included in the proposal, and the price for such work will be separately stated; a spar deck of white pine 3 by 6 inches to be laid, secured from underneath with the wood screw bolts, caulked and planed; berth deck of ash or yellow pine 2½ by 6 inches, spiked and bolted to the berth deck beams; also, caulked and planed ceiling planks of white oak to the flooring heads 5 inches thick, thence yellow pine 4 inches thick to the lower deck clamp; all of which will be estimated by the square superficial feet.

The materials and weight used in the construction to be approved, and the work to be inspected by such officer as the Secretary of the Treasury may appoint, and the work to be done according to the direction of the superintendent.

The vessels to be completed within *six* months from the day of delivering the moulds and plans of building.

The workmanship to be inspected previous to delivery by two competent judges, one to be chosen by each of the parties of the contract, who, in the event of their disagreement, shall select a third, who are to determine whether the work has been executed in all respects according to the proposals and agreement.

J. C. SPENCER,
Secretary of the Treasury.

march 23—t17Ap

TREASURY DEPARTMENT,
Washington, March 17, 1843.

SEALED PROPOSALS will be received at this Department, until the 17th April next, for six Engines, Boilers, and Propellers, constructed upon the plan known as "Hunter's plan." Two of said Engines, Boilers, and Propellers to be delivered on Lake Erie, as designated by the Secretary of the Treasury, the others at such place or places on the sea coast as the Secretary may direct.

Also, two Engines, Boilers, and Propellers upon the plan known as "Ericsson's plan;" to be delivered at some place on the sea coast as the Secretary of the Treasury may direct. The engines, boilers and propellers to be made of the very best materials, to bear the *proof* and *inspection* of such person or persons as may be selected by the Secretary of the Treasury. The boilers to have not less than seven hundred [700] fire surface each, working pressure eighty [80] pounds to the square inch, proof two hundred and forty [240] pounds, six [6] eighteen [18] inch cylinders, with three [3] feet stroke. The whole to be delivered as directed, within five months from the time of receiving the drawings and plans for building. The proposals will state the price for which the Engines, Boilers, and Propellers will be delivered and put into complete operation. But as the application of the engines working to either of the said plans is a patent right, the proposals will also state the price asked, including the authority to use the patent right, and also the price exclusive of said authority.

J. C. SPENCER,
Secretary of the Treasury.

march 23—t17Ap

FOR SALE AT THIS OFFICE.

SYNOPSIS OF THE CRUISE OF THE EXPLORING EXPEDITION, by its Commander, Lt. Charles Wilkes, with a chart, showing the tracks of the vessels.

BITUMEN: its varieties, properties, and uses, compiled from various sources, by Lieut. H. Wager Halleck, U. S. Corps of Engineers, under the direction of Col. J. G. Totten, Chief Engineer.